IN THE CLAIMS:

Please cancel Claims 4, 5, 15, 17, 18, 20-31, 34, 41, 42, 52, 54-68, 71 and 80-82 without prejudice or disclaimer of the subject matter recited therein.

Please amend Claims 1, 13, 16, 32, 35, 39, 50, 53, 56, 69 and 74-78 as follows.

1. (Currently Amended) A method of recording images of a subject object from different positions and orientations and processing the recorded image data to generate a three-dimensional computer model of the subject object, said method comprising the steps of:

supporting the subject object above a calibration object having a predetermined pattern of features using an object support having a known height;

recording at different positions and orientations a plurality of images of the subject object supported above the calibration object;

processing the recorded image data to calculate the position and orientation at which each of at least some of the images were recorded; and

generating, using the calculated positions and orientations, data defining a three-dimensional computer model of ~~at least~~ the subject object by defining a volume of voxels in a three-dimensional space in dependence upon the known height of the object support such that the object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

2. (Previously Presented) A method according to claim 1, wherein the images of the subject object, supported above the calibration object, are recorded with a background of a substantially uniform color behind the subject object such that, in each recorded image, the outline of the subject object is surrounded by the background except where the outline touches the support.

3. (Original) A method according to claim 2, wherein the background is provided by a background screen.

Claims 4 and 5. (Cancelled).

6. (Previously Presented) A method according to claim 1,

wherein the subject object is supported by at least one surface of the object support standing on the calibration object, and

wherein each surface of the object support supporting the subject object does not protrude substantially from beneath the subject object.

7. (Previously Presented) A method according to claim 1,

wherein the object support has calibration features thereon, and

wherein said processing step of calculating the position and orientation at which each of at least some of the images were recorded includes detecting calibration features

on the object support in image data and using the positions of the detected features to calculate the positions and orientations at which the images were recorded.

8. (Original) A method according to claim 7, wherein data defining the relative positions of the calibration features on the object support is prestored and used to calculate the positions and orientations at which the images were recorded.

9. (Original) A method according to claim 7,

wherein the object support is arranged relative to the calibration object in a predetermined configuration, and

wherein data defining the positions of the calibration features on the object support relative to the positions of the features on the calibration object is prestored and used to calculate the positions and orientations at which the images were recorded.

10. (Original) A method according to claim 1,

wherein the subject object is supported above a reflective surface, and

wherein processing is carried out to generate texture data for the three-dimensional computer model of the subject object in dependence upon image data that corresponds to reflections in the reflective surface.

11. (Original) A method according to claim 1, wherein the calibration object is three-dimensional.

12. (Original) A method according to claim 1, wherein the object support and the calibration object are formed as one, with the subject object being supported thereby above the predetermined pattern of features thereon.

13. (Currently Amended) A method of processing image data defining a plurality of images recorded at different positions and orientations of a subject object supported by an object support having a known height above a calibration object having a predetermined pattern of features, said method comprising the steps of:

calculating the positions and orientations at which at least some of the images were recorded by processing the image data; and

generating, using the calculated positions and orientations, data defining a three-dimensional computer model of the subject object but not the object support by defining a volume of voxels in a three-dimensional space in dependence upon the known height of the object support such that the object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

14. (Previously Presented) A method according to claim 13, wherein said calculating step of calculating the positions and orientations at which at least some of the images

were recorded includes detecting matching features in the image data defining respective images corresponding to features on the object support.

Claim 15. (Cancelled).

16. (Currently Amended) A method of processing image data to generate a three-dimensional computer model, said method comprising the steps of:

receiving image data defining at least in part a plurality of images of a subject object supported by an object support having a known height recorded at different relative positions and orientations;

receiving data defining the positions and orientations at which the images were recorded; and

generating data, by processing the received data, defining a three-dimensional computer model of the subject object but not the object support by performing processing using at least one known parameter of the object support to generate data defining the three-dimensional computer model of the subject object without generating data defining a three-dimensional computer model of the object support, by defining a volume of voxels in a three-dimensional space in dependence upon the known height of the object support such that the object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

Claims 17-31. (Cancelled).

32. (Currently Amended) A method according to claim 13[[,]] or claim 16 ~~or claim 20~~, wherein the generation of the data defining the three-dimensional computer model includes generating texture data using the image data.

33. (Original) A method according to claim 32, wherein the generation of the texture data includes processing the image data to identify data corresponding to a reflection of the subject object in a reflective surface, and using the identified data to generate texture data for a surface of the three-dimensional computer model.

Claim 34. (Cancelled).

35. (Currently Amended) A method according to claim 13[[,]] or claim 16 ~~or claim 20~~, further comprising generating a signal conveying data defining the three-dimensional computer model of the subject object.

36. (Original) A method according to claim 35, further comprising recording the signal either directly or indirectly.

Claims 37 and 38. (Cancelled).

39. (Currently Amended) A system for recording images of a subject object from different positions and orientations and for processing the recorded image data to generate a three-dimensional computer model of the subject object, said system comprising:

a calibration object having a predetermined pattern of features;

an object support having a known height for supporting the subject object higher than the calibration object;

an imager operable to record, at different positions and orientations, a plurality of images of the subject object supported higher than the calibration object; and

an image data processing apparatus, comprising:

a position and orientation calculator operable to process the recorded image data to calculate the position and orientation at which each of at least some of the images were recorded; and

a computer model generator operable to perform processing using the calculated positions and orientations to generate data defining a three-dimensional computer model of ~~at least~~ the subject object, by defining a volume of voxels in a three-dimensional space in dependence upon the known height of said object support such that said object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

40. (Previously Presented) A system according to claim 39, further comprising a screen having a substantially uniform color for placing behind the subject object so

that images of the subject object supported higher than the calibration object can be recorded with the screen behind the subject object such that, in each recorded image, the outline of the subject object is surrounded by the background except where the outline touches the support.

Claims 41 and 42. (Cancelled).

43. (Previously Presented) A system according to claim 39, wherein said object support is arranged such that, when the subject object sits thereon, no surface supporting the subject object protrudes substantially from beneath the subject object.

44. (Previously Presented) A system according to claim 39, wherein:

said object support has calibration features thereon; and

said position and orientation calculator is operable to detect calibration features on said object support in image data and use the positions of the detected features to calculate the positions and orientations at which the images were recorded.

45. (Previously Presented) A system according to claim 44, wherein:

said image data processing apparatus includes a data store for prestoring data defining the relative positions of the calibration features on the object support, and

said position and orientation calculator is operable to use prestored data from the data store to calculate the positions and orientations at which the images were recorded.

46. (Previously Presented) A system according to claim 44, wherein:

said object support is arranged to connect to said calibration object in a predetermined configuration;

said image data processing apparatus includes a data store for prestoring data defining the positions of the calibration features on said object support relative to the positions of the features on the calibration object when said object support is connected to said calibration object; and

said position and orientation calculator is operable to use prestored data from the data store to calculate the positions and orientations at which the images were recorded.

47. (Previously Presented) A system according to claim 39, wherein:

said calibration object has a reflective surface; and

said image data processing apparatus includes a texture generator operable to generate texture data for the three-dimensional computer model of the subject object in dependence upon image data that corresponds to reflections in the reflective surface.

48. (Previously Presented) A system according to claim 39, wherein said calibration object is three-dimensional.

49. (Previously Presented) A system according to claim 39, wherein said object support and said calibration object are formed as one with a surface for supporting the subject object such that, when the subject object sits thereon, the subject object is supported higher than, and separated from, the predetermined pattern of features.

50. (Currently Amended) An apparatus operable to process image data defining a plurality of images recorded at different positions and orientations of a subject object supported by an object support having a known height higher than a calibration object having a predetermined pattern of features, said apparatus comprising:

a position and orientation calculator operable to process the image data to calculate the positions and orientations at which at least some of the images were recorded; and

a computer model generator operable to perform processing using the calculated positions and orientations to generate data defining a three-dimensional computer model of the subject object but not the object support, by defining a volume of voxels in a three-dimensional space in dependence upon the known height of the object support such that the object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

51. (Previously Presented) An apparatus according to claim 50, wherein said position and orientation calculator includes a feature matcher operable to detect matching

features in the image data defining respective images corresponding to features on the object support.

Claim 52. (Cancelled).

53. (Currently Amended) An apparatus operable to process image data to generate a three-dimensional computer model, said apparatus comprising:

an image data receiver for receiving image data defining at least in part a plurality of images of a subject object supported by an object support <u>having a known height</u> recorded at different relative positions and orientations;

a position and orientation data receiver for receiving data defining the positions and orientations at which the images were recorded; and

a computer model generator operable to process the received data to generate data defining a three-dimensional computer model of the subject object but not the object support using at least one known parameter of the object support to generate data defining the three-dimensional computer model of the subject object without generating data defining a three-dimensional computer model of the object support, by defining a volume of voxels in a three-dimensional space in dependence upon the known height of the object support such that the object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

Claims 54 and 55. (Cancelled).

56. (Currently Amended) An apparatus according to claim ~~55~~ 53, wherein said computer model generator includes:

a voxel generator operable to define the volume of voxels in the three-dimensional space with the base plate of the volume set to be at a height higher than the calibration object corresponding to the known height of the object support; and

a voxel remover operable to remove the voxels from the volume in dependence upon the image data.

Claims 57-68. (Cancelled).

69. (Currently Amended) An apparatus according to claim 50[[,]] or claim 53 ~~or claim 57~~, wherein said computer model generator includes a texture data generator operable to generate texture data using the image data.

70. (Previously Presented) An apparatus according to claim 69, wherein:

said texture data generator includes a reflection data identifier operable to process the image data to identify data corresponding to a reflection of the subject object in a reflective surface, and

said texture data generator is operable to use the identified data to generate texture data for a surface of the three-dimensional computer model.

Claims 71-73. (Cancelled).

74. (Currently Amended) A storage device storing computer program instructions ~~for causing~~ to program a programmable processing apparatus to become operable to perform a method as set out in claim 13[[,]] or claim 16 ~~or claim 20~~.

75. (Currently Amended) A physically-embodied computer program product carrying computer program instructions in computer-readable form, including ~~signal conveying~~ instructions ~~for causing~~ to program a programmable processing apparatus to become operable to perform a method as set out in claim 13[[,]] or claim 16 ~~or claim 20~~.

76. (Currently Amended) A system for recording images of a subject object from different positions and orientations and for processing the recorded image data to generate a three-dimensional computer model of the subject object, said system comprising:

a calibration object having a predetermined pattern of features;

an object support having a known height for supporting the subject object higher than said calibration object;

an imager for recording, at different positions and orientations, a plurality of images of the subject object supported higher than said calibration object; and

an image data processing apparatus, comprising:

means for processing the recorded image data to calculate the position and orientation at which each of at least some of the images were recorded; and

means for performing processing using the calculated positions and orientations to generate data defining a three-dimensional computer model of ~~at least~~ the subject object, by defining a volume of voxels in a three-dimensional space in dependence upon the known height of said object support such that said object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

77. (Currently Amended) An apparatus for processing image data defining a plurality of images recorded at different positions and orientations of a subject object supported by an object support <u>having a known height</u> higher than a calibration object having a predetermined pattern of features, said apparatus comprising:

means for processing the image data to calculate the positions and orientations at which at least some of the images were recorded, and

means for performing processing using the calculated positions and orientations to generate data defining a three-dimensional computer model of the subject object but not the object support, by defining a volume of voxels in a three-dimensional space in

dependence upon the known height of the object support such that the object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

78. (Currently Amended) An apparatus for processing image data to generate a three-dimensional computer model, said apparatus comprising:

means for receiving image data defining at least in part a plurality of images of a subject object supported by an object support having a known height recorded at different relative positions and orientations;

means for receiving data defining the positions and orientations at which the images were recorded; and

means for processing the received data to generate data defining a three-dimensional computer model of the subject object but not the object support using at least one known parameter of the object support to generate data defining the three-dimensional computer model of the subject object without generating data defining a three-dimensional computer model of the object support, by defining a volume of voxels in a three-dimensional space in dependence upon the known height of the object support such that the object support, but not the subject object, is excluded from the volume, and removing voxels from the volume in dependence upon the image data.

Claim 79-82. (Cancelled).